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**PRELIMINARY ASSESSMENT/  
VISUAL SITE INSPECTION**

**THERM-O-DISC, INC.  
MANSFIELD, OHIO  
OHD 004 159 869**

**FINAL REPORT**

EPA Region 5 Records Ctr.



315249

**Prepared for**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Waste Programs Enforcement  
Washington, DC 20460**

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- A EPA PRELIMINARY ASSESSMENT FORM 2070-12
- B VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS
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RELEASED  
DATE 4/21/99  
RIN # 039-099  
INITIALS MU

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CONFIDENTIAL

## EXECUTIVE SUMMARY

PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Therm-O-Disc, Inc. (Therm-O-Disc) facility in Mansfield, Richland County, Ohio. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritizing RCRA facilities for corrective action.

The Therm-O-Disc facility manufactures thermostats for the heating, ventilation, and air conditioning (HVAC), automotive, and appliance industries. The facility generates large quantities of hazardous waste in the form of degreasing and cleaning solvents. The solvents include waste 1,1,1-trichloroethane (F001), waste perchloroethylene (F001), waste acetone (F003), and waste isopropanol (D001). Therm-O-Disc also generates waste cutting and drawing oils (D001), waste stoddard solvent (D001 and D009), chromium shavings (D007), lead-contaminated sludge (D008), empty 55-gallon drums, and nonhazardous wastewater.

Therm-O-Disc was listed on the facility's RCRA Part A permit application as a treatment, storage, or disposal (TSD) facility with storage of hazardous waste in tanks. In August 1986, Therm-O-Disc requested that EPA withdraw the facility's Part A permit application for TSD status, and change the status to that of a large-quantity generator of hazardous waste with less than 90-day storage. In order to obtain this status, Therm-O-Disc closed two hazardous waste storage tanks (SWMUs 2 and 7) in March 1990. OEPA approved closure in August 1990.

The Therm-O-Disc facility was built in 1954 and the building covers about 308,480 square feet. In 1968, the Emerson Electric Company (Emerson) purchased Therm-O-Disc and made it a subsidiary company of Emerson, but did not change the product line. The facility occupies about 94 acres in a rural area of Mansfield. About 280 private residences lie within 1 mile of the facility. Therm-O-Disc employs about 1,200 people over three shifts and is monitored 24 hours per day by security personnel.

The PA/VSI identified the following 10 SWMUs and no AOCs at the facility:

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#### Solid Waste Management Units

1. Drum Storage Area
2. Former Waste Perchloroethylene Tank
3. Waste Perchloroethylene Tanks
4. D-Waste Storage Tank
5. Chromium Shavings Collector
6. Empty Drum Storage Area
7. Waste 1,1,1-Trichloroethane Tanks
8. Satellite Accumulation Areas
9. Perchloroethylene Still
10. 1,1,1-Trichloroethane Still

The potential for release of hazardous constituents from all SWMUs to ground water and on-site soils is low due to adequate containment and release controls at the facility. Areas for waste and chemical storage are bermed and concrete is sealed. Area drinking water is obtained from the Clear Fork Reservoir and ten municipal wells are located about 6 miles southwest and upgradient of the facility. The nearest drinking water well is located about 2.5 miles southeast and downgradient of the facility. Three industrial wells located on Therm-O-Disc's property supply the facility with noncontact cooling water and drinking water; however, the facility will soon be supplied by water from the City of Mansfield.

The potential for release of hazardous waste constituents to surface water is low because of adequate containment systems. The nearest surface water body is an unnamed creek located about 25 feet south of the facility. The creek is used mainly for storm water drainage and National Pollutant Discharge Elimination System (NPDES) discharge from Therm-O-Disc. The creek enters a marshy area about 200 feet southwest of the facility.

The potential for release of hazardous constituents to air is low. No unpermitted air releases or complaints concerning odor have been documented. Therm-O-Disc possesses about 45 air permits covering ovens, degreasers, boilers, and air compressors.

PRC believes that the Therm-O-Disc facility presents a low threat of release to surrounding receptors and the environment. Therm-O-Disc maintains sound waste management practices at the facility and all active SWMUs have sound containment systems. No further action is recommended for the SWMUs at the facility.

## **1.0 INTRODUCTION**

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release of hazardous waste or constituents to the environment has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Therm-O-Disc, Inc. (Therm-O-Disc) facility (EPA Identification No. OHD 004 159 869) in Mansfield, Richland County, Ohio. The PA was completed on August 3, 1992. PRC gathered and reviewed information from the Ohio Environmental Protection Agency (OEPA) Southwest District files, Ohio Department of Natural Resources (ODNR), U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), and from EPA Region 5 RCRA files. The VSI was conducted on August 5, 1992. It included interviews with facility representatives and a walk-through inspection of the facility. PRC identified 10 SWMUs and no AOCs at the facility.

**PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and nine inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.**



## **2.0 FACILITY DESCRIPTION**

This section describes the facility's location, past and present operations, waste generating processes and waste management practices, a history of documented releases, regulatory history, environmental setting, and receptors.

### **2.1 FACILITY LOCATION**

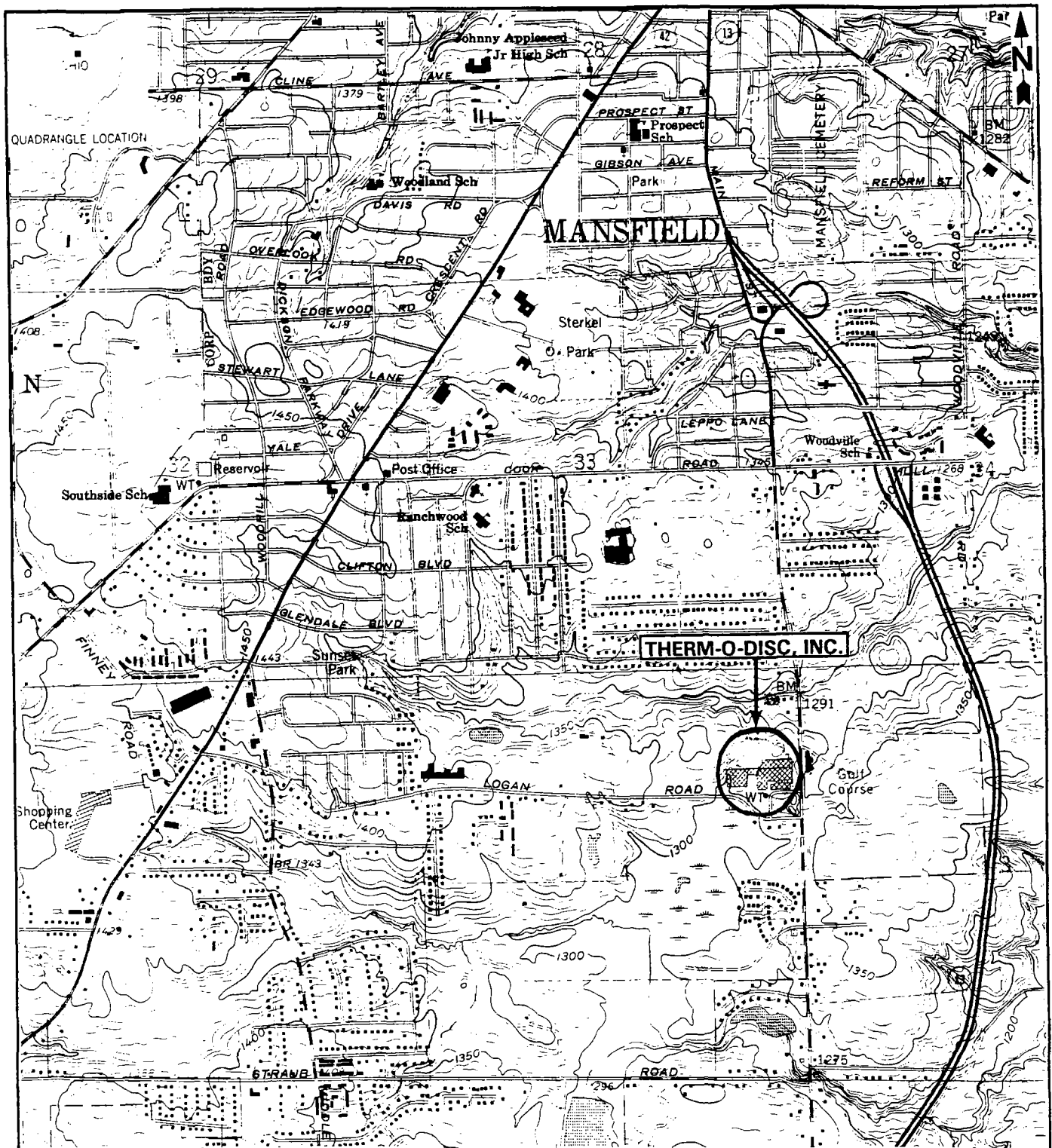
The Therm-O-Disc facility is located at 1320 South Main Street in a rural area of Mansfield, Richland County, Ohio (latitude 40° 43' 18.57" N and longitude 83° 10' 31" W). Figure 1 shows the location of the facility in relation to the surrounding topographic features. The facility is bordered to the north by the Corral Amusement Center, to the east by Possum Run Country Club, to the south by a residential area and a wooded area, and to the west by Mansfield Christian School and a residential area.

### **2.2 FACILITY OPERATIONS**

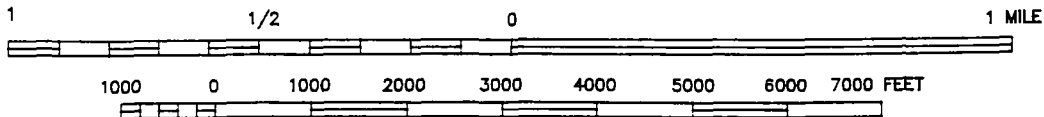
The Therm-O-Disc facility occupies about 94 acres. The facility building occupies 308,480 square feet. Therm-O-Disc has been operating since 1954. Emerson Electric Company (Emerson) purchased Therm-O-Disc in 1968, and made it a subsidiary of Emerson, but did not change the product line. Therm-O-Disc employs about 1,200 people over three shifts.

The Therm-O-Disc facility manufactures thermostats for the heating, ventilation, and air conditioning (HVAC), appliance, and automotive industries. The facility fabricates parts such as molded castings and screw machine/press shop components for thermostat assembly. Some parts are assembled at the facility; others are shipped to other Therm-O-Disc facilities for final assembly.

The Therm-O-Disc facility contains several bulk storage tanks which are surrounded by containment walls. The facility has one drum storage area which stores mostly virgin solvents and small amounts of hazardous waste. There are several satellite accumulation areas throughout the facility which are located near epoxy dispensers and parts cleaners. Regulatory involvement at the facility over the years has been limited. Solid waste generated from facility operations and the SWMUs where they are managed are discussed in detail in Section 2.3.



SCALE 1:24000



SCALE: 1" = 2,000'

THERM-O-DISC, INC.  
MANSFIELD, OHIO

FIGURE 1  
FACILITY LOCATION

Source: Modified From USGS, Mansfield South Quadrangle,  
Photorevised 1982.

**PRC** ENVIRONMENTAL MANAGEMENT, INC.

## 2.3

### WASTE GENERATION AND MANAGEMENT

Wastes are generated and managed at various locations at the Therm-O-Disc facility. SWMUs and their current status are identified in Table 1. The location of the SWMUs in relation to the facility layout are shown in Figure 2. Wastes generated at the facility are summarized in Table 2. Facility generation and management of both hazardous and nonhazardous wastes are discussed below.

Therm-O-Disc generates large amounts of spent solvents throughout the facility. The solvents include waste 1,1,1-trichloroethane (TCA) (F001), waste perchloroethylene (PCE) (F001), waste acetone (F003), and waste isopropanol (D001). The facility also generates waste cutting and drawing oils (D001), waste stoddard solvent (D001 and D009), chromium shavings (D007), lead-contaminated sludge (D008), empty 55-gallon drums, and nonhazardous wastewater.

The facility uses TCA in vapor degreasing of thermostat parts to remove particulates and finger oils prior to final assembly. The spent TCA (F001) is pumped from the degreaser directly to a TCA holding tank. From the holding tank, the spent TCA is pumped into the 1,1,1-Trichloroethane Still (SWMU 10) where the TCA is partially reclaimed. The distilled TCA is reused for degreasing parts until it is spent. Spent TCA and TCA still bottoms (F001) are pumped from the still into the Waste 1,1,1-Trichloroethane Tank (SWMU 7). Safety-Kleen of Hebron, Ohio (Safety-Kleen), removes about 3,500 gallons of spent TCA and TCA still bottoms every 90 days for fuels blending.

PCE is used to degrease parts manufactured in the screw machine/press shop prior to assembly. The spent PCE solvent (F001) is pumped directly to the Perchloroethylene Still (SWMU 9). Distilled PCE is reintroduced to the degreaser and is used until spent. Spent PCE and PCE still bottoms (F001) are pumped from the still into the Waste Perchloroethylene Tank (SWMU 3). About 600 gallons of the waste are removed from the facility every 90 days by Safety-Kleen for fuels blending. The Former Perchloroethylene Tank (SWMU 2) was used for storage of spent PCE and PCE still bottoms until March 1990 when it was closed and replaced with SWMU 3 to meet requirements for RCRA status change from treatment, storage, or disposal (TSD) facility to a less than 90-day storage, large-quantity generator.

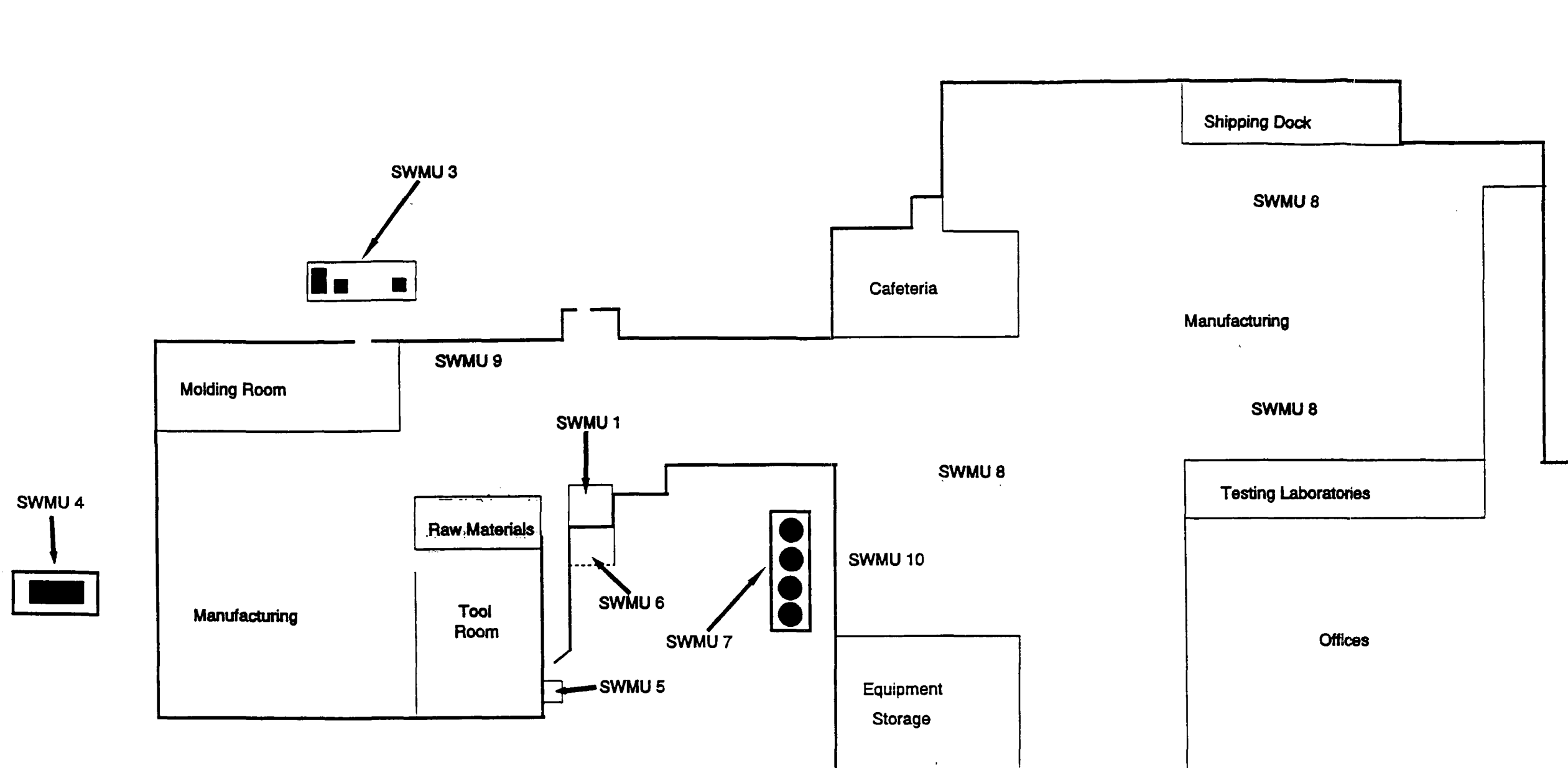
Acetone and isopropanol are used to flush epoxy residues from dispensing machines. Spent acetone (F003) and spent isopropanol (D001) are stored separately in Satellite Accumulation Areas (SWMU 8) near the points of generation. When the accumulation drums become full, they are transferred to the Drum Storage Area (SWMU 1) where they are stored for less than 90 days.

**TABLE 1**  
**SOLID WASTE MANAGEMENT UNITS**

<u>SWMU Number</u>	<u>SWMU Name</u>	<u>RCRA Hazardous Waste Management Unit<sup>a</sup></u>	<u>Status</u>
1	Drum Storage Area	No	Active
2	Former Waste Perchloroethylene Tank	Yes	RCRA closed in 1990; removed from facility
3	Waste Perchloroethylene Tank	No	Active
4	D-Waste Storage Tank	No	Active
5	Chromium Shavings Collector	No	Active
6	Empty Drum Storage Area	No	Active
7	Waste 1,1,1- Trichloroethane Tank	Yes	Active; RCRA closed in 1990; currently active as less than 90-day storage
8	Satellite Accumulation Areas	No	Active
9	Perchloroethylene Still	No	Active
10	1,1,1-Trichloroethane Still	No	Active

**Note:**

<sup>a</sup> A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.



#### Solid Waste Management Units

- |  |   |
|--|---|
| SWMU 1 Drum Storage Area                               | SWMU 6 Empty Drum Storage Area          |
| SWMU 2 Former Waste Perchloroethylene Tank (not shown) | SWMU 7 Waste 1,1,1-Trichloroethane Tank |
| SWMU 3 Waste Perchloroethylene Tank                    | SWMU 8 Satellite Accumulation Areas     |
| SWMU 4 D-Waste Storage Tank                            | SWMU 9 Perchloroethylene Still          |
| SWMU 5 Chromium Shavings Collector                     | SWMU 10 1,1,1-Trichloroethane Still     |

45' 0' 45' 90'  
SCALE: 1" = 90'

THERMO-DISC, INC.  
MANSFIELD, OHIO

FIGURE 2  
FACILITY LAYOUT

**PRC** ENVIRONMENTAL MANAGEMENT, INC.

SOURCE: Modified from Thermo-O-Disk Facility Map, received by PRC August 5, 1992

**TABLE 2**  
**SOLID WASTES**

<u>Waste/EPA Waste Code<sup>a</sup></u>	<u>Source</u>	<u>Solid Waste Management Unit<sup>b</sup></u>
Spent 1,1,1-Trichloroethane/F001	Vapor Degreasing/TCA Distilling	7 and 10
TCA Still Bottoms/F001	TCA Distilling	7 and 10
Spent Perchloroethylene/F001	Vapor Degreasing/PCE Distilling	3, 9, and formerly 2
PCE Still Bottoms/F001	PCE Distilling	3, 9, and formerly 2
Spent Acetone/F003	Machine Cleaning	1 and 8
Spent Isopropanol/D001	Machine Cleaning	1 and 8
Waste Cutting and Drawing Oils/D001	Machine Lubrication	4
Waste Stoddard Solvent/D001 and D009	Machine Flushing	4
Chromium Shavings/D007	Parts Grinding	5
Lead-Contaminated Sludge/D008	Parts Cleaning	8
Empty 55-Gallon Drums/NA	General Processes	6
Wastewater/NA	Parts Cleaner/Drum Rinsing	None

Notes:

<sup>a</sup> Not applicable (NA) designates nonhazardous waste

<sup>b</sup> "None" indicates that the waste is not managed on site

One to two 55-gallon drums of each spent solvent are removed from the facility every 90 days by Safety-Kleen for fuels blending.

Therm-O-Disc generates waste cutting and drawing oils (D001) from lubricating machinery. These waste materials are pumped directly to the D-Waste Storage Tank (SWMU 4). The facility generates about 1,500 gallons of the waste oils every 90 days.

Waste stoddard solvent (D001) containing trace amounts of mercury (D009) are also pumped to the D-Waste Storage Tank (SWMU 4). Stoddard solvent is used for flushing out machinery, and tends to accumulate machined mercury residue. Safety-Kleen removes the waste materials from SWMU 4 every 90 days for fuels blending.

Minor amounts of chromium shavings (D007) are generated from surface grinding parts in the toolroom. The Chromium Shavings Collector (SWMU 5) collects the shavings from the toolroom and directly deposits the waste into two 55-gallon drums. The facility has never generated a significant enough amount of chromium shavings to mandate disposal.

Small amounts of lead-contaminated sludge (D008) are generated by an abrasive parts cleaner. The sludge contains low amounts of lead from solder removed by the parts cleaner. The sludge is periodically removed from the cleaner and placed in a Satellite Accumulation Area (SWMU 8) adjacent to the parts cleaner. Nonhazardous wastewater from the unit is discharged to Mansfield Publicly Owned Treatment Works (POTW). About one drum of the sludge per year is sent to the Chem-Met, Inc., in Wyandot, Michigan, and landfilled.

Empty 55-gallon drums are generated throughout the facility. Prior to storage in the Empty Drum Storage Area (SWMU 6), the drums are triple-rinsed to remove traces of the hazardous waste or virgin solvent which they had previously stored. The wastewater generated from the rinsing is discharged to the POTW. The drums are removed from the facility every 90 days by Columbus Steel Drum, Inc.

## **2.4 HISTORY OF DOCUMENTED RELEASES**

No releases have been documented from the facility.

## **2.5 REGULATORY HISTORY**

Therm-O-Disc filed a Notification of Hazardous Waste Activity form with EPA in October 1980 (Therm-O-Disc, 1980a). The company submitted a RCRA Part A permit

application to EPA in November 1980. The application listed the facility as a TSD facility with storage of hazardous waste in tanks. The wastes listed on the application were ignitable waste (D001), corrosive waste (D002), and waste TCA (F001) (Therm-O-Disc, 1980b).

In August 1986, Therm-O-Disc requested that EPA withdraw the facility's Part A permit application for TSD status, and change the status to a large quantity generator of hazardous waste with less than 90-day storage. During December 1988, the company filed a closure plan for two hazardous waste storage tanks (SWMUs 2 and 7). After one revision, OEPA accepted Therm-O-Disc's closure plan in July 1989 (OEPA, 1989a).

Therm-O-Disc contracted Chem-Tech Consultants (Chem-Tech) to close the waste tanks. Closure began in March 1990. After the waste was removed from the tanks, the tanks were cleaned and rinsed, and the dikes surrounding the tanks were pressure washed. The waste generated during the closure activities was shipped to Ross Incinerator, in Grafton, Ohio for disposal. A Chem-Tech consultant obtained verification samples of the wastewater to ensure that the tanks and dikes were thoroughly cleaned (Chem-Tech, 1990). Closure was completed in late March 1990. A professional engineer certified closure of the tanks in April 1990 (Therm-O-Disc, 1990a). In August 1990, after inspecting the tanks, OEPA found the tanks to be closed in accordance with the approved closure plan (OEPA, 1990a).

The facility's current status is that of a large quantity generator of hazardous waste with less than 90-day storage. In September 1990, Therm-O-Disc submitted a Notification of Regulated Waste Activity form to EPA to reflect the facility's status change (Therm-O-Disc, 1990b).

OEPA, representing EPA, has conducted two RCRA Interim Status inspections at the Therm-O-Disc facility. Violations found during these inspections include failure to revise the facility's waste analysis plan, shipment of F-solvent wastes to treatment facilities without attendant or complete notifications, lack of an approved closure plan, and lack of required containment around waste tanks (OEPA, 1989b and 1989c). Therm-O-Disc corrected the waste analysis plan violation by closing the waste storage tanks. There is no documentation stating that Therm-O-Disc corrected the other violations found during the inspections; however, neither EPA nor OEPA took further action against Therm-O-Disc.

Therm-O-Disc has a current National Pollutant Discharge Elimination System (NPDES) permit. The permit allows Therm-O-Disc to discharge storm water and noncontact cooling water to an unnamed creek that is located about 25 feet south of the facility. The permit requires



Therm-O-Disc to monitor several parameters, including temperature, oil, grease, flow rate, and pH (OEPA, 1990b).

Therm-O-Disc possesses about 45 air permits covering ovens, degreasers, hoods, boilers, and air compressors. No complaints from area residents have been documented.

The facility has no underground storage tanks and there has been no CERCLA activity at the facility.

## **2.6 ENVIRONMENTAL SETTING**

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the facility.

### **2.6.1 Climate**

The climate in Richland County consists of cold winters and warm, humid summers. The daily average temperature is 52 degrees Fahrenheit (°F). The lowest average monthly temperature is 21°F in January. The highest average monthly temperature is 86°F in July. Precipitation for Richland County is well distributed throughout the year. Average yearly rainfall for Richland County is 35.76 inches. Rainfall peaks in June at 3.53 inches and is at its lowest in October at 1.93 inches (USDA, 1975). The 1-year, 24-hour maximum rainfall is 2.30 inches, and the average yearly net precipitation is 4.0 inches (Todd, 1983).

### **2.6.2 Flood Plain and Surface Water**

The nearest surface water body is an unnamed creek located about 25 feet south of the facility. The creek is used mainly for storm water drainage and NPDES discharge from Therm-O-Disc. The creek enters a marshy area about 200 feet southwest of the facility. The marshy area discharges to Possum Run about 0.5 miles south of the facility. Possum Run flows southeast for about 7 miles before entering Pleasant Hill Reservoir (USDA, 1975).

The City of Mansfield obtains drinking water mainly from Clear Fork Reservoir, although some of the city's water is obtained from ten wells located about 6 miles southwest of the facility near the reservoir (PRC, 1992). Clear Fork Reservoir is located about 4.5 miles west-southwest of the facility. Therm-O-Disc does not lie in a flood plain (National Flood Insurance Program, 1979).

### 2.6.3

#### Geology and Soils

Richland County lies on the east flank of the Findlay Arch. The Findlay Arch is a northeast branch of the Cincinnati Arch, a large anticline running from Tennessee to Canada. The bedrock in the area is Mississippian-age sandstone of the Cuyahoga Group (ODNR, 1979). Bedrock at the Therm-O-Disc facility is about 40 feet below ground surface. During the Pleistocene Epoch, advance and retreat of Wisconsinan glaciers deposited most of the unconsolidated materials overlying area bedrock. Upon retreat of the glaciers, meltwater from glacier ice cut channels through the glacial deposits, creating the drainage pattern that exists today.

Well logs from on-site industrial wells list the following units in descending order (Therm-O-Disc, 1992):

- 0 to 1 foot: Soil and fill material
- 1 to 20 feet: Interbedded yellow clay, sand, and gravel
- 20 to 40 feet: Interbedded blue clay, sand, and gravel
- 40 to 55 feet: Interbedded yellow sand, clay, and gravel
- 55 to 80 feet: Soft yellow sandstone
- 80 to 280 feet: Hard yellow sandstone
- 280 to 325 feet: Hard gray sandstone

Soils at the facility belong to the Wooster-Canfield association. Typically, the Wooster-Canfield soils are well drained and medium textured; they are usually formed in glacial till (ODNR, 1979).

### 2.6.4

#### Ground Water

Depth to ground water at the facility is about 105 feet below ground surface. The facility lies over sandstone bedrock capable of yielding 200 gallons of water per minute (Therm-O-Disc, 1992). Three industrial wells on Therm-O-Disc's property supply the facility with noncontact cooling water and drinking water. However, the facility will soon be supplied with city water because a license is now required to use industrial wells for drinking water. Ground-water flow in the area is to the south. PRC was unable to obtain the area water table elevation at the facility.

As mentioned in Section 2.6.2, ten drinking water wells are located about 6 miles southwest of the facility near the Clear Fork Reservoir. Although the City of Mansfield obtains most of the drinking water from the Clear Fork Reservoir, about 30 percent of the city's drinking water is obtained from these wells. The water-bearing formation of the wells is sandstone, which

is capable of yielding large quantities of water. The wells pump from 250,000 to 2.6 million gallons of water per day. The water table elevation in the wells varies from 5 feet to 35 feet (PRC, 1992).

## **2.7 RECEPTORS**

The Therm-O-Disc facility occupies about 94 acres in a rural area in Mansfield, Ohio. About 280 private residences lie within 1 mile of the facility. The facility is bordered to the north by the Corral Amusement Center, to the east by Possum Run Country Club, to the south by a residential area and a wooded area, and to the west by Mansfield Christian School and a residential area. The nearest residential area is located about 0.3 mile south of the facility. The nearest school, Mansfield Christian School, is located about 0.8 mile west of Therm-O-Disc. The facility is monitored 24 hours per day by security personnel. The facility is not fenced.

As mentioned in Section 2.6.2, the nearest surface water body is located about 25 feet south of the facility. The creek is used mainly for storm water drainage and NPDES discharge from Therm-O-Disc. The creek enters a marshy area about 200 feet southwest of the facility. The marshy area discharges to Possum Run about 0.5 miles south of the facility. Possum Run flow southeast for about 7 miles before entering Pleasant Hill Reservoir (USDA, 1975).

Most of the area drinking water is supplied by the City of Mansfield. The city draws water from the Clear Fork Reservoir and municipal wells located about 6 miles southwest of the Therm-O-Disc facility. Clear Fork Reservoir is located about 4.5 miles west-southwest of the facility. Three industrial wells on Therm-O-Disc's property currently supply the facility with noncontact cooling water and potable water. However, drinking and industrial water will soon be supplied by the City of Mansfield. The nearest private drinking water well is located about 2.5 miles southeast and downgradient of the facility.

The unnamed creek used for storm water drainage and NPDES discharge from Therm-O-Disc is a sensitive environment mainly because of aquatic life. No wetlands exist within 2 miles of the facility.

### 3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the eight SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC's observations. Figure 2 shows the SWMU locations.

#### **SWMU 1**

#### **Drum Storage Area**

**Unit Description:** The Drum Storage Area is located inside the west section of the facility. The unit stores mostly virgin oil, although some hazardous waste is also stored in the area. The area of the unit measures about 20 feet by 40 feet. About 110, 55-gallon drums of product are stored in the unit on racks and pallets (see Photograph No. 1). The base of the unit is sealed concrete and has no drains. A collection sump is located near the doorway to prevent release. The entrance of the unit is bermed.

**Date of Startup:** The unit has been used since 1966.

**Date of Closure:** The unit is active, less than 90-day storage of hazardous waste.

**Wastes Managed:** The area stores mostly virgin oil. Drums of hazardous waste are also stored in the area for less than 90 days. These drums contain waste acetone (F003) and waste isopropanol (D001). One to two 55-gallon drums of each spent solvent are removed from the facility every 90 days by Safety-Kleen for fuels blending.

**Release Controls:** The unit has a sealed concrete base and contains no drains. A collection sump is located near the doorway to prevent releases.

**History of Documented Releases:** No releases from this unit have been documented.

**Observations:** The unit was in sound condition and showed no signs of deterioration. The area is locked 24 hours per day. All drums are properly labeled. No evidence of release was noted.

**SWMU 2****Former Waste Perchloroethylene Tank**

**Unit Description:** The Former Waste Perchloroethylene Tank was located aboveground outside the northwest section of the facility building. The tank stored waste PCE from a distillation process. The steel tank had a diameter of 64 inches, was 18 feet long, and had a capacity of 3,000 gallons. It was surrounded by a steel enclosure and a sealed concrete containment wall.

**Date of Startup:** The tank was first used for waste storage in November 1980.

**Date of Closure:** Therm-O-Disc closed the unit in March 1990 with the intent of reopening it under the facility's new status. However, the tank was in poor condition and was replaced with a new tank (SWMU 3). OEPA approved the closure in August 1990.

**Wastes Managed:** The unit stored waste PCE (F001) and PCE still bottoms (F001) generated from the distillation of spent PCE used in degreasers.

**Release Controls:** The tank had a steel enclosure and was surrounded by a concrete containment wall.

**History of Documented Releases:** No releases from the unit have been documented.

**Observations:** The tank was not observed during the VSI because it was sold to a Therm-O-Disc employee after OEPA approved closure. PRC noted no evidence of release in or around the dike that contained the tank.

**SWMU 3****Waste Perchloroethylene Tank**

**Unit Description:** The Waste Perchloroethylene Tank is located outside the northwest section of the facility building. This tank replaced the Former Waste Perchloroethylene Tank (SWMU 2) and has a capacity of 1,500 gallons. The concrete base of the unit is sealed with an epoxy resin and measures 15 feet by 50 feet. The base slopes

towards the east. The tank is surrounded by a 2-foot-high concrete containment wall (see Photograph No. 2). A virgin PCE tank and a distilled PCE tank are also within the containment wall (see Photograph No. 3).

**Date of Startup:** The tank has been used since 1990.

**Date of Closure:** The unit is active, less than 90-day storage of hazardous waste.

**Wastes Managed:** The tank stores spent PCE (F001) and PCE still bottoms (F001) generated from the distillation of spent PCE from degreasing operations. The hazardous waste is removed from the facility every 90 days by Safety-Kleen for fuels blending.

**Release Controls:** The unit is contained within a 2-foot-high concrete containment wall. The base of the unit is epoxy-sealed concrete.

**History of Documented Releases:** No releases from the unit have been documented.

**Observations:** The unit was in sound condition. The floor and walls of the unit are stained due to a chemical reaction of the sealant and paint. No evidence of release was observed.

#### **SWMU 4**

#### **D-Waste Storage Tank**

**Unit Description:** The D-Waste Storage Tank is located outside the southwest section of the facility building. The tank stores waste cutting and drawing oils (D001), waste stoddard solvent (D001), and trace amounts of mercury (D009). The capacity of the tank is 4,000 gallons. The concrete base of the unit is sealed with an epoxy coating. The tank is surrounded by a 3.5-foot-high, sealed, cinder-block containment wall (see Photograph No. 4).

**Date of Startup:** The unit was first used in 1974.

**Date of Closure:** The unit is active, less than 90-day storage of hazardous waste.

**Wastes Managed:** The tank stores waste cutting and drawing oils (D001), stoddard solvent (D001), and trace amounts of mercury (D009).

**Release Controls:** The unit is surrounded by a 3.5-foot-high containment wall and has a sealed concrete base.

**History of Documented Releases:** No releases from this unit have been documented.

**Observations:** The unit was in sound condition and showed no evidence of release. The floor and walls of the unit are stained due to a chemical reaction of the paint and sealant.

**SWMU 5 Chromium Shavings Collector**

**Unit Description:** The Chromium Shavings Collector is located outside the west-southwest section of the facility building. The unit is made of steel and measures about 15 cubic feet. The collector is not surrounded by walls or a fence. The unit collects chromium shavings generated by the surface grinding of parts done in the facility's toolroom. The shavings are directly deposited into two 55-gallon drums on an unbermed concrete base (see Photograph No. 5).

**Date of Startup:** The unit has been used since 1984.

**Date of Closure:** The unit is active.

**Wastes Managed:** The unit collects chromium shavings (D007) generated by parts grinding done in the toolroom at the facility. Therm-O-Disc has never generated enough of this waste to mandate disposal, and considers the 55-gallon drums a satellite accumulation area.

**Release Controls:** The unit directly deposits the waste into two 55-gallon drums.

**History of Documented Releases:** No releases from this unit have been documented.

**Observations:** The unit was in sound condition and showed no evidence of release. The drums are continuously covered.

**SWMU 6 Empty Drum Storage Area**

**Unit Description:** The Empty Drum Storage Area is located outside the west-southwest section of the facility building just north of SWMU 5. The area has a 15- by 40-foot asphalt base and is fenced. The drums are triple rinsed and stacked horizontally to prevent rain water accumulation in the drums (see Photograph No. 6). The drums are eventually removed from the facility for recycling by Columbus Drum, Inc., in Columbus, Ohio.

**Date of Startup:** The area has been used since 1968.

**Date of Closure:** The unit is active.

**Wastes Managed:** The unit stores empty waste drums until removed by Columbus Steel Drum, Inc. The drums are triple-rinsed prior to storage. The wastewater generated from the rinsing is discharged to the Mansfield POTW.

**Release Controls:** The area has an asphalt base. Drums are triple rinsed at the facility and stacked horizontally.

**History of Documented Releases:** No releases from this unit have been documented.

**Observations:** PRC observed no evidence of release. However, several minor cracks in the asphalt were noted.

**SWMU 7 Waste 1,1,1-Trichloroethane Tank**

**Unit Description:** The Waste 1,1,1-Trichloroethane Tank is located aboveground outside the west side of the east section of the facility building. The tank is steel and has a capacity of 2,500 gallons. The diameter of the tank is 64 inches and the tank is 15 feet long (see Photograph No. 7). The tank, along with three other bulk storage



tanks, is located on an epoxy-sealed concrete pad measuring about 15 feet by 40 feet. The tanks are surrounded by a 3-foot-high cinder-block containment wall (see Photograph No. 8).

<b>Date of Startup:</b>	The unit was first used in November 1980.
<b>Date of Closure:</b>	The unit was closed in March 1990 to change the facility's status from a TSD facility to a generator of hazardous waste with less than 90-day storage. OEPA approved the closure in August 1990. The unit was reopened shortly after the closure.
<b>Wastes Managed:</b>	The unit stores spent TCA (F001) and TCA still bottoms (F001) generated from the distillation of spent TCA used for degreasing. The spent TCA and TCA still bottoms are removed from the facility every 90 days by Safety-Kleen for fuels blending.
<b>Release Controls:</b>	The base of the unit is epoxy-sealed concrete. The unit is surrounded by a 3.5-foot-high cinder-block containment wall.
<b>History of Documented Releases:</b>	No releases from the unit have been documented.
<b>Observations:</b>	The unit was in sound condition, and no evidence of release was noted. The floor and walls of the unit are stained due to a chemical reaction of the paint and sealant.
<b>SWMU 8</b>	<b>Satellite Accumulation Areas</b>
<b>Unit Description:</b>	Fifty-five gallon drums are used as Satellite Accumulation Areas throughout the interior of the facility. The drums are located indoors on sealed concrete floors near the points of generation. Satellite accumulation is used for various waste sources, including parts cleaners and epoxy dispensers (see Photograph No. 9).
<b>Date of Startup:</b>	These areas have been used since the early 1980s.
<b>Date of Closure:</b>	The areas are active.

<b>Wastes Managed:</b>	Waste acetone (F003) and waste isopropanol (D001) are accumulated in drums near the epoxy dispensers. When the accumulation drums become full, they are placed in the Drum Storage Area (SWMU 1). The waste solvents are removed from the facility every 90 days by Safety-Kleen for fuels blending. Lead contaminated sludge (D008) is accumulated in a drum near a parts cleaner. About one drum of the sludge is sent to Chem-Met, Inc., Wyandot, Michigan, and landfilled.
<b>Release Controls:</b>	The drums are located indoors on sealed concrete floors.
<b>History of Documented Releases:</b>	No releases from the areas have been documented.
<b>Observations:</b>	The areas were in good condition. Bungs on the drums were closed. PRC noted no evidence of release.
 <b>SWMU 9</b>	
<b>Unit Description:</b>	<b>Perchloroethylene Still</b>  The Perchloroethylene Still is located inside the northwestern portion of the building. The still is constructed of stainless steel and has a capacity of 800 gallons. It is used to remove debris from spent PCE used in a degreaser. Spent PCE is pumped directly from the degreaser to the still. Upon exiting the still, the reclaimed PCE is pumped to a degreaser for future use. The spent PCE that can no longer be distilled and PCE still bottoms are pumped from the still to the Waste Perchloroethylene Tank (SWMU 7).
<b>Date of Startup:</b>	The unit has been used since 1980.
<b>Date of Closure:</b>	The unit is active.
<b>Wastes Managed:</b>	The unit distills PCE used in a degreaser and generates spent PCE (F001) that can no longer be distilled and PCE still bottoms (F001).
<b>Release Controls:</b>	The unit is located indoors on epoxy-sealed concrete floors. The unit is monitored regularly.

**History of  
Documented Releases:**

No releases from this unit have been documented.

**Observations:**

During the VSI, the unit was in sound condition and well-maintained.

**SWMU 10**

**1,1,1-Trichloroethane Still**

**Unit Description:**

The 1,1,1-Trichloroethane Still is located inside the main manufacturing area. The unit consists of a holding tank and still. The still is constructed of stainless steel and has a capacity of 800 gallons. It is used to remove debris from spent TCA used in a degreaser. Spent TCA is pumped directly from the degreaser to the holding tank and then to the still. Upon exiting the still, the reclaimed TCA is pumped to a holding tank for future degreasing use.

**Date of Startup:**

The unit has been used since 1980.

**Date of Closure:**

The unit is active.

**Wastes Managed:**

The unit distills TCA used in a degreaser and generates spent TCA (F001) that can no longer be distilled and TCA still bottoms (F001). Safety-Kleen removes the spent TCA and TCA still bottoms every 90 days for fuels blending.

**Release Controls:**

The unit is located indoors on epoxy-sealed concrete. The unit is monitored regularly.

**History of  
Documented Releases:**

No releases from this unit have been documented.

**Observations:**

During the VSI, the unit was in sound condition and well-maintained.

#### **4.0 AREAS OF CONCERN**

**PRC identified no AOCs during the PA/VSI.**

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## 5.0 CONCLUSIONS AND RECOMMENDATIONS

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The PA/VSI identified eight SWMUs and no AOCs at the Therm-O-Disc facility.

Background information on the facility's location; operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. Following are PRC's conclusions and recommendations for each SWMU. Table 3, at the end of this section, summarizes the SWMUs at the facility and the recommended further actions.

### **SWMU 1                      Drum Storage Area**

**Conclusions:**                      The Drum Storage Area is located inside the west section of the facility. The unit stores mostly virgin oil and a small amount of hazardous waste. The base of the unit is sealed and contains no drains. A collection sump is located near the doorway to prevent release.

Because the unit is located indoors on sealed concrete floors and does not contain drains, the potential for release to ground water, surface water, air, and on-site soils is low.

**Recommendations:**                      PRC recommends no further action for this SWMU.

### **SWMU 2                      Former Waste Perchloroethylene Tank**

**Conclusions:**                      The Former Waste Perchloroethylene Tank was located aboveground, outside the northwest section of the facility and was used to store spent PCE and PCE still bottoms. The tank had a capacity of 3,000 gallons and a steel enclosure. The tank was located in a concrete containment area. Therm-O-Disc closed the tank in March 1990; OEPA approved closure of the unit in August 1990. The tank was sold to a Therm-O-Disc employee after certification. A new tank (Waste Perchloroethylene Tank [SWMU 3]) replaced the Former Waste Perchloroethylene Tank in April 1990.

Because of the release controls of the unit, the potential for release to ground water, surface water, air, and on-site soils was low.

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Recommendations: PRC recommends no further action for this SWMU.

**SWMU 3 Waste Perchloroethylene Tank**

Conclusions: The Waste Perchloroethylene Tank is located outside the northwest section of the facility. The tank was opened in 1990 to replace the Former Waste Perchloroethylene Tank (SWMU 2) and stores spent PCE and PCE still bottoms. The capacity of the tank is 1,500 gallons. The tank, along with three other bulk storage tanks, is surrounded by a concrete containment wall. The base of the unit is sealed concrete.

The potential for release to ground water, surface water, air, and on-site soils is low due to the adequate containment of the unit.

Recommendations: PRC recommends no further action for this SWMU.

**SWMU 4 D-Waste Storage Tank**

Conclusions: The D-Waste Storage Tank is located outside the southwest section of the facility. The tank stores waste cutting and drawing oils, stoddard solvent, and trace amounts of mercury. The capacity of the tank is 4,000 gallons. The unit has a sealed concrete base and is surrounded by a concrete containment wall. Because of these release controls, the potential for release to ground water, surface water, air, and on-site soils is low.

Recommendations: PRC recommends no further action for this SWMU.

**SWMU 5 Chromium Shavings Collector**

Conclusions: The Chromium Shavings Collector is located outside the west-southwest section of the facility. The unit collects minor amounts of chromium shavings from the toolroom where parts grinding is performed. Because the unit is completely contained and directly deposits the shavings into two 55-gallon drums, the potential for release to ground water, surface water, air, and on-site soils is low.

Recommendations: PRC recommends no further action for this SWMU.

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**SWMU 6 Empty Drum Storage Area**

**Conclusions:** The Empty Drum Storage Area is located outside the west-southwest section of the facility just north of SWMU 5. The drums are triple rinsed prior to storage. The wastewater generated from the rinsing is discharged to the Mansfield POTW. The area has an asphalt base that contains a few minor cracks. Because the drums are triple rinsed, stacked horizontally, and stored closed, the potential for release to ground water, surface water, air, and on-site soils is low.

**Recommendations:** PRC recommends no further action for this SWMU.

**SWMU 7 Waste 1,1,1-Trichloroethane Tanks**

**Conclusions:** The Waste 1,1,1-Trichloroethane Tank is located outside the west side of east section of the facility. The tank stores spent TCA and TCA still bottoms from a distillation process. Three other bulk storage tanks are located in the same containment area. The base of the unit is sealed concrete. The tank was RCRA closed in March 1990 to change the facility's status. OEPA approved closure of the tank in August 1990. It was reopened in April 1990.

Due to adequate containment in the area, the potential for release to ground water, surface water, air, and on-site soils is low.

**Recommendations:** PRC recommends no further action for this SWMU.

**SWMU 8 Satellite Accumulation Areas**

**Conclusions:** Satellite Accumulation Areas are located indoors throughout the facility. Waste is accumulated in these areas in 55-gallon drums near the points of generation, including the epoxy dispensers and parts cleaners. Because the areas are located indoors on sealed concrete floors, the potential for release to ground water, surface water, air, and on-site soils is low.

**Recommendations:** PRC recommends no further action for this SWMU.

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**SWMU 9**

**Perchloroethylene Still**

**Conclusions:** The Perchloroethylene Still is located inside the northwestern portion of the building. The unit cleans PCE used in a degreaser and generates spent PCE that can no longer be distilled and PCE still bottoms. The still is constructed of stainless steel and has a capacity of 800 gallons. The unit is located indoors on epoxy-sealed concrete.

Due to adequate containment in the area, the potential for release to ground water, surface water, air, and on-site soils is low.

**Recommendations:** PRC recommends no further action for this SWMU.

**SWMU 10**

**1,1,1-Trichloroethane Still**

**Conclusions:** The 1,1,1-Trichloroethane Still is located inside the main manufacturing area of the facility. The unit is constructed of stainless steel and has a capacity of 800 gallons. The still cleans TCA used in a degreaser and generates spent TCA that can no longer be distilled and TCA still bottoms.

Because the unit is located indoors on epoxy-sealed concrete, the potential for release to ground water, surface water, air, and on-site soils is low.

**Recommendations:** PRC recommends no further action for this SWMU.



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TABLE 3  
 SWMU SUMMARY

<u>SWMU</u>	<u>Dates of Operation</u>	<u>Evidence of Release</u>	<u>Recommended Further Action</u>
1. Drum Storage Area	1966 to present	None	No further action
2. Former Waste Perchloro-ethylene Tank	1980 to 1990	None	No further action
3. Waste Perchloro-ethylene Tank	1990 to present	None	No further action
4. D-Waste Storage Tank	1974 to present	None	No further action
5. Chromium Shavings Collector	1984 to present	None	No further action
6. Empty Drum Storage Area	1968 to present	None	No further action
7. Waste 1,1,1 - Trichloroethane Tank	1980 to present	None	No further action
8. Satellite Accumulation Areas	Early 1980s to present	None	No further action
9. Perchloroethylene Still	1980 to present	None	No further action
10. 1,1,1-Trichloroethane Still	1980 to present	None	No further action

## REFERENCES

- Chem-Tech Consultants (Chem-Tech), 1990. Closure Report for Therm-O-Disc, Inc. (Therm-O-Disc) Facility, April 11.
- National Flood Insurance Program, 1979. Flood Plain Information for the Therm-O-Disc Area.
- Ohio Department of Natural Resources (ODNR), 1979. Soil Survey for Richland County.
- Ohio Environmental Protection Agency (OEPA), 1989a. Letter to Therm-O-Disc Regarding the Facility's Revised Closure Plan, November 16.
- OEPA, 1989b. Letter to Therm-O-Disc Regarding the October 24, 1988, RCRA Interim Status Inspection, March 3.
- OEPA, 1989c. Letter to Therm-O-Disc Regarding Violations Noted During the November 13, 1989, RCRA Interim Status Inspection of the Facility, December 19.
- OEPA, 1990a. Letter to Therm-O-Disc Regarding Inspection of the Closed Tanks, August 28.
- OEPA, 1990b. National Pollutant Discharge Elimination System (NPDES) Permit for Therm-O-Disc, June 27.
- PRC Environmental Management, Inc. (PRC), 1992. Log of Telephone Conversation Between Angelo Kalousiadis, Manager of Mansfield's Water Treatment Plant, and Kate Reising, PRC, Regarding the City's Drinking Water Source and Area Ground Water, August 24.
- Therm-O-Disc, 1980a. Notification of Hazardous Waste Activity Form Filed With the U.S. Environmental Protection Agency (EPA), October 30.
- Therm-O-Disc, 1980b. Part A Permit Application to EPA, November 13.
- Therm-O-Disc, 1990a. Letter to OEPA Regarding Closure at the Facility, April 16.
- Therm-O-Disc, 1990b. Notification of Regulated Waste Activity Form submitted to EPA, September 21.
- Therm-O-Disc, 1992. Well Log Packet and Facility Map Received During Visual Site Inspection (VSI), August 5.
- Todd, D.K., 1983. Ground-Water Resources of the United States, Premier Press, Berkeley, CA.
- U.S. Department of Agriculture (USDA), 1975. Soil Survey of Richland County, September.
- U.S. Geological Survey (USGS), 1982. Topographic Map for the Mansfield South Quadrangle, 7.5 Minute Series.

**ATTACHMENT A**  
**EPA PRELIMINARY ASSESSMENT FORM 2070-12**



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE OH 02 SITE NUMBER OHD004159869

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Therm-O-Disc, Inc.	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER 1320 South Main Street				
03 CITY Mansfield	04 STATE OH	05 ZIP CODE 44907	06 COUNTY Richland	07 COUNTY CODE 139	08 CONG DIST
09 COORDINATES: LATITUDE 40°43'18.57"N		LONGITUDE 83°10'31"W			
10 DIRECTIONS TO SITE (Starting from nearest public road) Take Interstate 71 to Exit 69. Turn left onto State Route 13. Travel north for about 2 miles; Therm-O-Disc is on the left.					

III. RESPONSIBLE PARTIES

01 OWNER (if known) Emerson Electric, Co.	02 STREET (Business, mailing residential) 8000 West Florissant Ave.				
03 CITY St. Louis	04 STATE MO	05 ZIP CODE 63136	06 TELEPHONE NUMBER		
07 OPERATOR (if known and different from owner)	08 STREET (Business, mailing, residential)				
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER		
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency Name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER _____ (Specify) <input type="checkbox"/> G. UNKNOWN					
14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3010 DATE RECEIVED: 10/30/80 <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / / <input type="checkbox"/> C. NONE MONTH DAY YEAR    MONTH DAY YEAR					

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES    DATE 08/05/92 <input type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): PRC Environmental Management, Inc.	
02 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION 1954   present    UNKNOWN BEGINNING YEAR ENDING YEAR	
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED The facility generates spent solvents, including waste 1,1,1-trichloroethane (F001), waste perchloroethylene (F001), waste acetone (F003), and waste isopropanol (D001). Therm-O-Disc also generates waste cutting and drawing oils (D001) and minor amounts of chromium shavings (D007) and lead-contaminated sludge (D008).			
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION No potential hazard from facility			

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.) <input type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input type="checkbox"/> C. LOW (Inspect on time-available basis) <input type="checkbox"/> D. NONE (No further action needed; complete current disposition form)			
--	--	--	--

VI. INFORMATION AVAILABLE FROM

01 CONTACT Kevin Pierard	02 OF (Agency/Organization) U.S. EPA		03 TELEPHONE NUMBER (312) 886-4448	
04 PERSON RESPONSIBLE FOR ASSESSMENT Pete Zelinskas	05 AGENCY	06 ORGANIZATION PRC	07 TELEPHONE NUMBER (513) 241-0149	08 DATE 08/30/92 MONTH DAY YEAR

**ATTACHMENT B**  
**VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS**

## VISUAL SITE INSPECTION SUMMARY

Therm-O-Disc, Inc.  
1320 South Main Street  
Mansfield, Ohio  
OHD 004 159 869

**Date:** August 5, 1992

**Primary Facility Representative:** Mark Vanek, Environmental Engineer  
**Representative Telephone No.:** (419) 525-8500

**Additional Facility Representatives:** Sam Lewis  
Frank Brado

**Inspection Team:** Pete Zelinskas, PRC Environmental Management, Inc.  
Kate Reising, PRC Environmental Management, Inc.

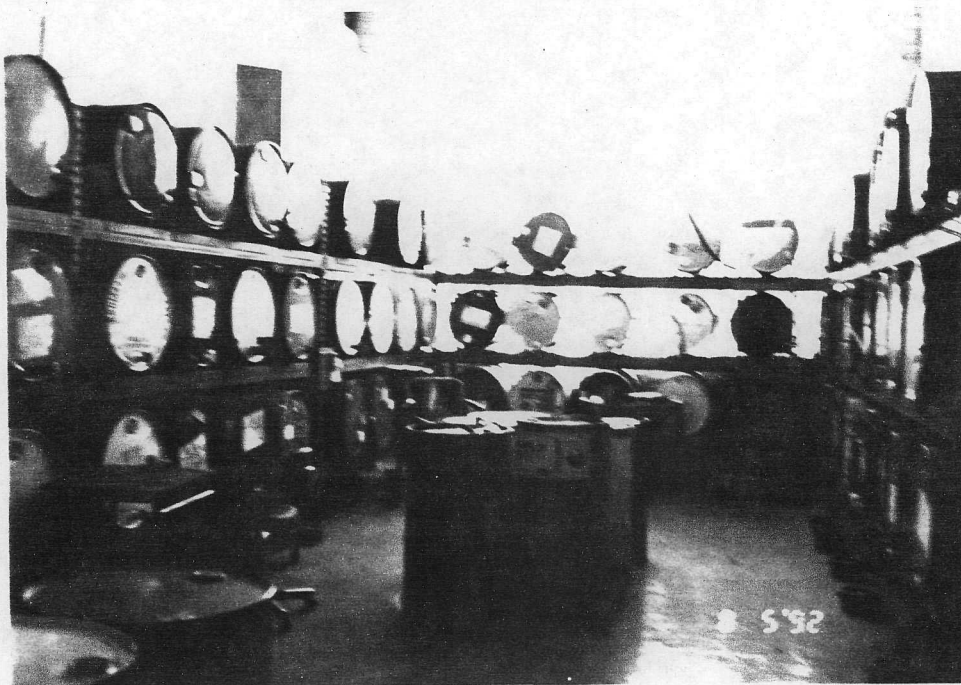
**Photographer:** Kate Reising

**Weather Conditions:** Sunny, 80°F.

**Summary of Activities:** The visual site inspection (VSI) began at 12:00 p.m. with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. Facility representatives then discussed the facility's past and current operations, solid wastes generated, and release history. Facility representatives provided the inspection team with copies of requested documents.

The VSI tour began at 12:30 p.m. All SWMUs were observed. The interior of the facility was first toured, and the facility representatives explained the various processes. The outside of the facility was then toured, which included most of the SWMUs.

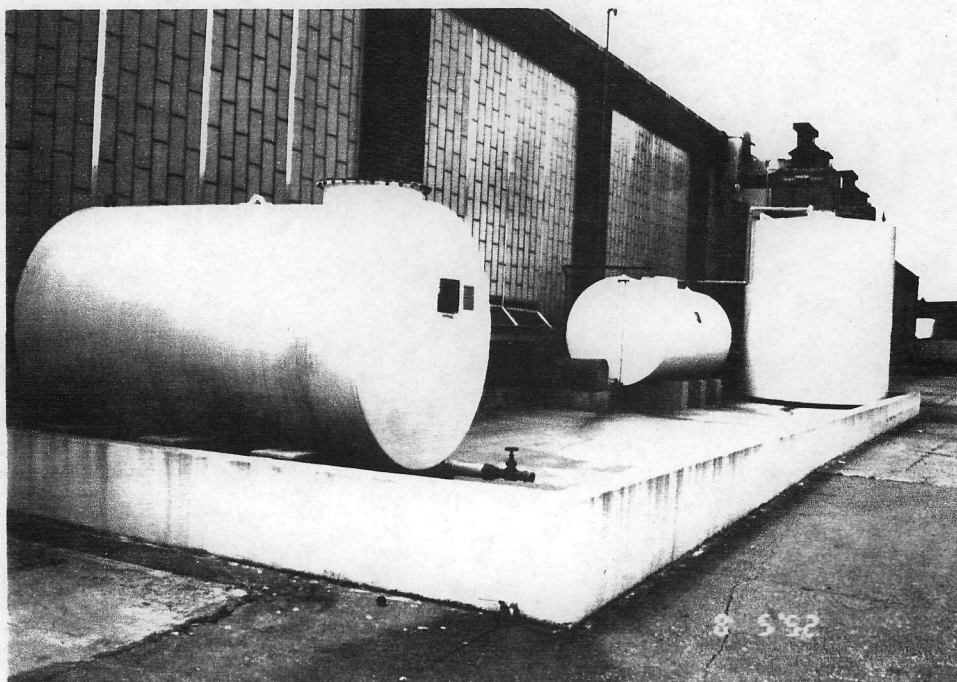
The tour concluded at 1:10 p.m., after which the inspection team held an exit meeting with facility representatives. Therm-O-Disc supplied PRC with a facility map and well logs. The VSI was completed and the inspection team left the facility at 1:20 pm.



Photograph No. 1  
Orientation: South

Location: SWMU 1  
Date: 8/5/92

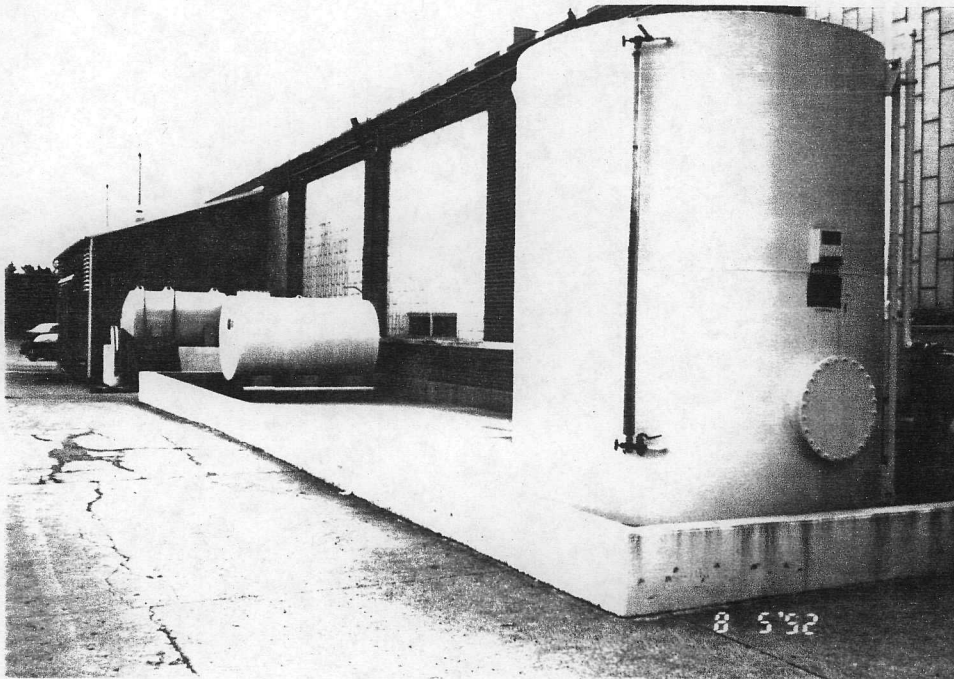
Description: Drum Storage Area containing drums of virgin oil and hazardous waste.



Photograph No. 2  
Orientation: West

Location: SWMU 3  
Date: 8/5/92

Description: Waste Perchloroethylene Tank in the foreground



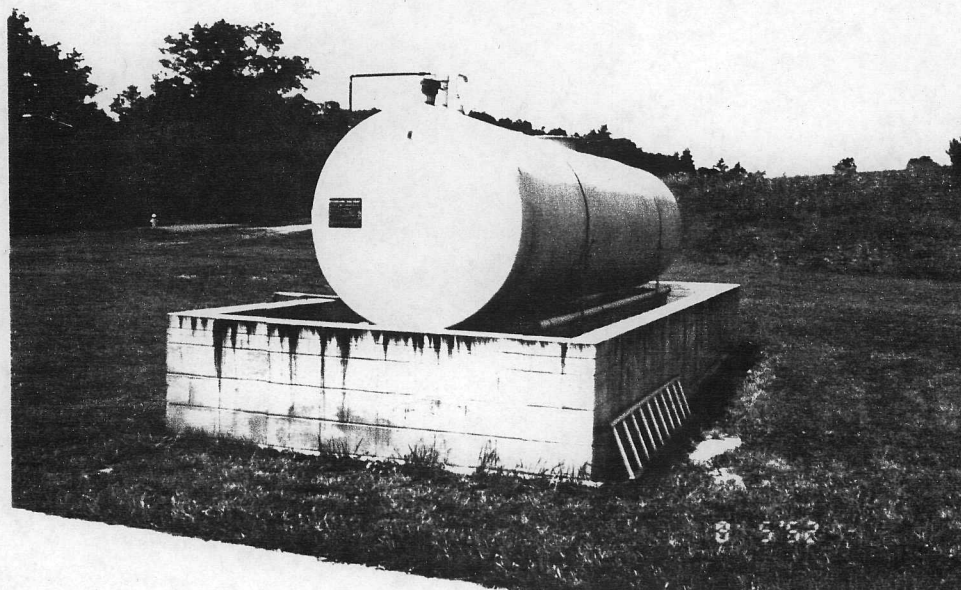
Photograph No. 3

Orientation: East

Description: Waste Perchloroethylene Tank. Note concrete containment wall.

Location: SWMU 3

Date: 8/5/92



Photograph No. 4

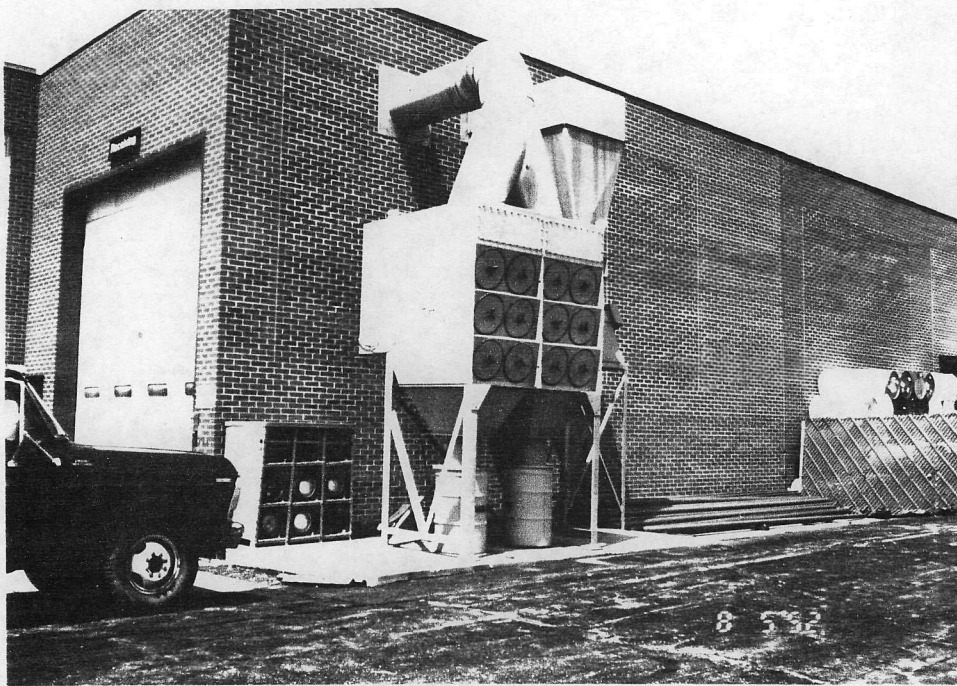
Orientation: South

Description: D-Waste Storage Tank. The floor and walls of the unit are stained due to a chemical reaction of the paint and sealant.

Location: SWMU 4

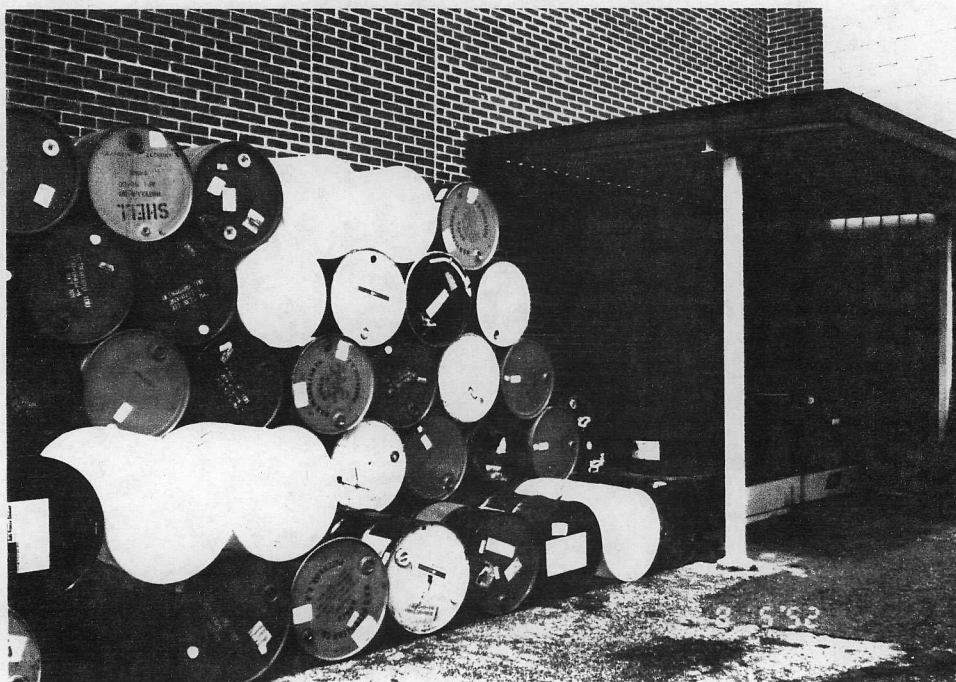
Date: 8/5/92





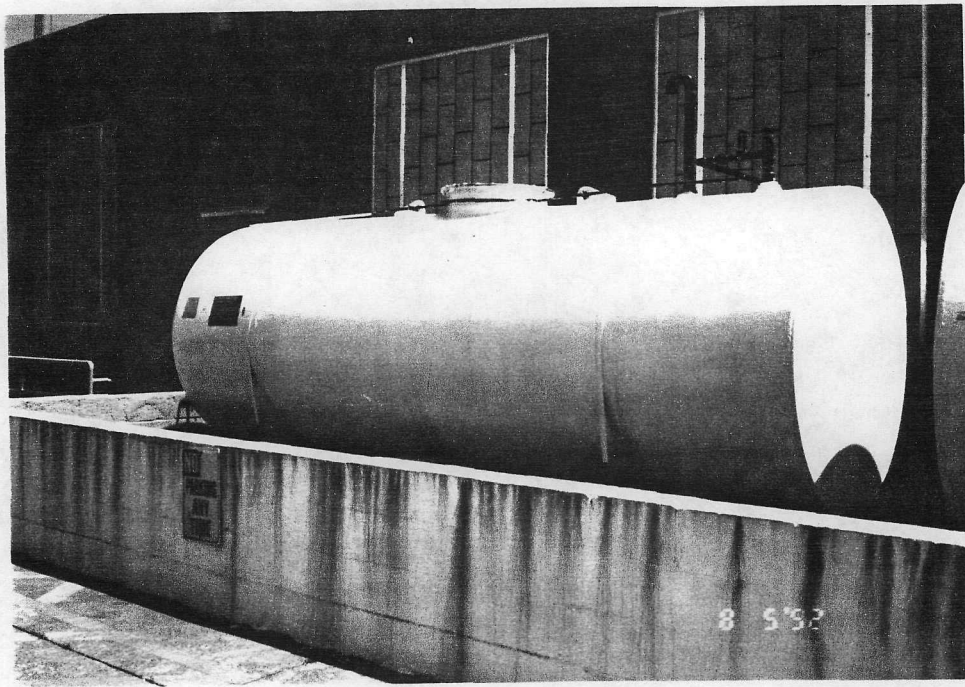
Photograph No. 5  
 Orientation: Northeast  
 Description: Chromium Shavings Collector

Location: SWMU 5  
 Date: 8/5/92



Photograph No. 6  
 Orientation: Northeast  
 Description: Empty Drum Storage Area

Location: SWMU 6  
 Date: 8/5/92



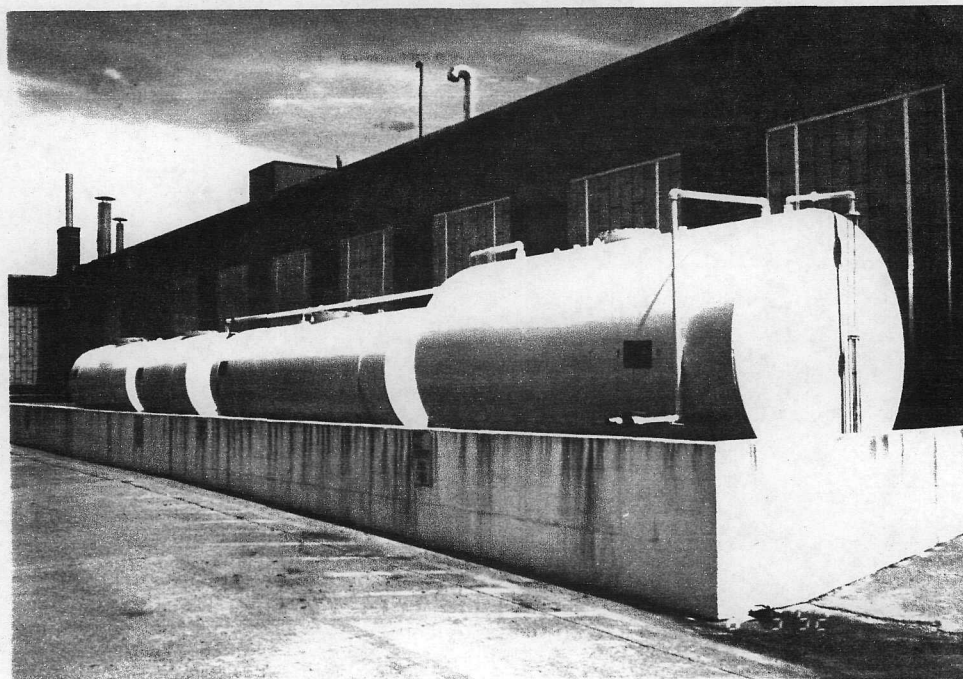
Photograph No. 7

Orientation: West

Description: Waste 1,1,1 - Trichloroethylene Tank. The floor and walls of the unit are stained due to a chemical reaction of the paint and sealant.

Location: SWMU 7

Date: 8/5/92



Photograph No. 8

Orientation: Northwest

Description: The Waste 1,1,1 - Trichloroethylene Tank is furthest to the left. Note containment area.

Location: SWMU 7

Date: 8/5/92





Photograph No. 9  
Orientation: Northeast  
Description: A typical satellite accumulation area.

Location: SWMU 8  
Date: 8/5/92

**ATTACHMENT C**  
**VISUAL SITE INSPECTION FIELD NOTES**

60 8-5-92

1200 VSI at Thermodyne, Inc.

Manotfield, OH.

PRT - Pete Zelinskas - Lead  
- Kate Reising (Photos)

Facility Contact: Mark Vaneck

\* Building 1954

\* Production 1968

Every three years had some  
conservation until 1980.

1400-1500 <sup>12</sup> 1200-1300 degree

Product line has remained  
same. Some to Mexico to  
reduce overhead.

Thermobabs, temperature  
sensors and safety controls  
mainly for the appliance  
industry + automotive.

\* Security guard 24 hours  
3 shifts. Lights on thirds.

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\* Individual wells for  
drinking water. City  
water going to be main  
drinking water. Have  
sampled wells. OK. But  
need licensed operator  
(94-2 area, b 3034004?)  
if drinking. Three industrial  
wells. ~200 ft.

\* Have NRDES. See file.  
Planning on stopping  
degreasing and using  
aqueous liquids.

\* NRDES - Grease & Oil, p22  
Temp. 2 incidents, corrected.

\* Air, 45 pounds for ovens,  
degreasers, & molding bating,  
hoods, boilers, air compressors

\* 1988 Fuel Oil, 5000  
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- \* Acetone used for thinning and cleaning the equipment. Photo 1 SAA acetone. Partially assembly, lubrication.
- \* (1,1) vapor degreaser, oils very clean, no stains
- \* Lead waste from abrasive cleaner. Generates sludge solder  $\rightarrow$  lead. & water to 8000. Tubs with soap solution. Clean dump once per month. SAA here.
- \* Have very elaborate spill control. Two main units Team of 10 people for each shift for spill control.
- \* SWMU / Drum Storage area. Most virgin oil. Little waste. No drains.

- \* (1,1) vapor degreaser, oil  
very clean, no stains

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cleaner. Generates sludge  
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solution. Clean jump once  
per month. SAA here.

- \* Have very elaborate spill control. Two main units Team of 10 people for each shift for spill control.

- \* SWMC / Drum Storage Area  
Most used oil  
Little waste. No drains.

43

Collection dump at doorway  
mostly virgin oil.

$\approx 20 \text{ e } 48 \text{ na tabela 2}$

sealed concrete floor.

- ~~18~~ Item 2 Former Desc Nant

- 2) worm 3 - Ben waste tank  
1500 gallons, virgin 4200 gallon  
per. , 2000 distilled.

15 x 50ft concrete sealed stormwater drain, Sloped 2'-1' containment wall.

- \* Dust collections,

- Storm water - south te.

- \* Sucrum 4- D-waste  
storage tank - 4660 gallons  
Cinder block containment  
Epoxy sealed 3.5' x 8'  
wall. Perform annual  
brightness test. Line  
1/4" to 2/4" to 2/4" to 2/4"

64

secondary contained. Sealant  
reacting with paint.

\* WDS outfall.

\* Bughouse for collecting  
material for surface grinding.  
Chromium - shavings  
chromo. Satellite accom.  
to have never accumulated  
enough  $\approx$  8 years.

\* SWM Empty drum  
storage area. Fenced  
low drum. No roof.  
Spares. Less than 1-inch  
thick. Some soap drums  
excepted. Oil. Drums  
Columbus Steel Drum,  
Black Lick.

\* Trichloroethane  
Closed & re-opened.

65

will have to close.

15' x 40' center block 3.5 ft  
sealed. 4 tanks

water - 2500

1500 distilled

3000 dirty to still

4000 water.

poly-ethylene sealant

1310 Tour complete

New digging analysis.

& well log for emergency

Nothing found.

Obtaining copies of  
analysis. Also supplying  
spill account.

The Central  
Amusement

Possum Run  
G.C.

Harzfeld  
Christian  
School

located Houses

66

Fresh wide spread area  
1330 PM existing facility

~~Site of 2nd building  
8.5.92~~